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NORTHERN REGION

Three Year Water Quality Monitoring Program
(1/76 through 10/78 inclusive)
Cook County - Palos Hills/Carlson

After reviewing the water quality for the above site and the proposal of Andrews Engineering regarding a three year monitoring program involving five monitor wells surrounding the site, I would make the following recommendations regarding the future of ground-water monitoring in its vicinity:

1. It is doubtful whether continuing monitoring here will tell us anything we don't already know. Ground water in the immediate vicinity of the site has been, is, and likely will continue to be polluted for some time. Fortunately, there does not appear to be any drinking water wells between the site and the nearest source of ground-water discharge, the Des Plaines River.
2. The Andrews Engineering recommendation is deficient in several respects due to problems with some of the wells recommended for monitoring. Also, it is desirable that several chemical parameters be added to the suggested list of TDS, Cl and Fe.
3. With the above in mind, the following monitoring program is suggested to cover the period of January, 1976 through October, 1978 inclusive:
 - a. Wells #58 and #60 within the landfill proper should be monitored for leachate quality and ground-water head build-up. Recommended wells to be monitored quarterly commencing January, 1976 for the following parameters are: TDS (or ROE), COD, Cl, Hardness, Ammonia nitrogen, Fe, SO₄, and Boron. Also, water levels should be measured just prior to each sampling.
 - b. Wells FP1 (or FP2 - one of these is damaged, but either should do; Andrews recommended FP1), 3-71, 54A, 54B and FP15 should be monitored quarterly commencing January, 1976 for the following parameters: TDS (or ROE), COD, Cl and Ammonia nitrogen. Water levels should be measured just prior to each sampling.



4. The following information may prove useful, for the record, regarding status of wells surrounding the Carlson site. Several leachate wells within the fill were improperly extended as refuse was deposited around them and are difficult, if not impossible to sample. Wells #58 and #60 should not present problems in this regard as they are 4" ID. Wells 59, 61, 62, 63 and 64, however are subject, in varying degrees to this difficulty. Wells 55A and 55B have been heavily influenced by road salt and should not be used to monitor leachate migration. Finally, FP4 through FP13 inclusive, east of Mannheim Road and south of 111th Street are of such poor construction so as to preclude their use for monitoring purposes.

TPC:ch

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